

ABSTRACT OF THE DISCLOSURE

A low-alloy heat-resistant steel may be used to manufacturing a large element which has uniform superior high temperature properties through a surface layer to a center part. The low-alloy heat-resistant steel comprises carbon in an amount of 0.20 to 0.35% by weight, silicon in an amount of 0.005 to 0.35% by weight, manganese in an amount of 0.05 to 1.0% by weight, nickel in an amount of 0.05 to 0.3% by weight, chromium in an amount of 0.8 to 2.5% by weight, molybdenum in an amount of 0.1 to 1.5% by weight, tungsten in an amount of 0.1 to 2.5% by weight, vanadium in an amount of 0.05 to 0.3% by weight, phosphorus in an amount not greater than 0.012% by weight, sulfur in an amount not greater than 0.005% by weight, copper in an amount not greater than 0.10% by weight, aluminum in an amount not greater than 0.01% by weight, arsenic in an amount not greater than 0.01% by weight, tin in an amount not greater than 0.01% by weight, antimony in an amount not greater than 0.003% by weight, and the balance being iron and unavoidable impurities, and containing a metallic structure having an austenitic grain size number in a range of from 3 to 6.

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